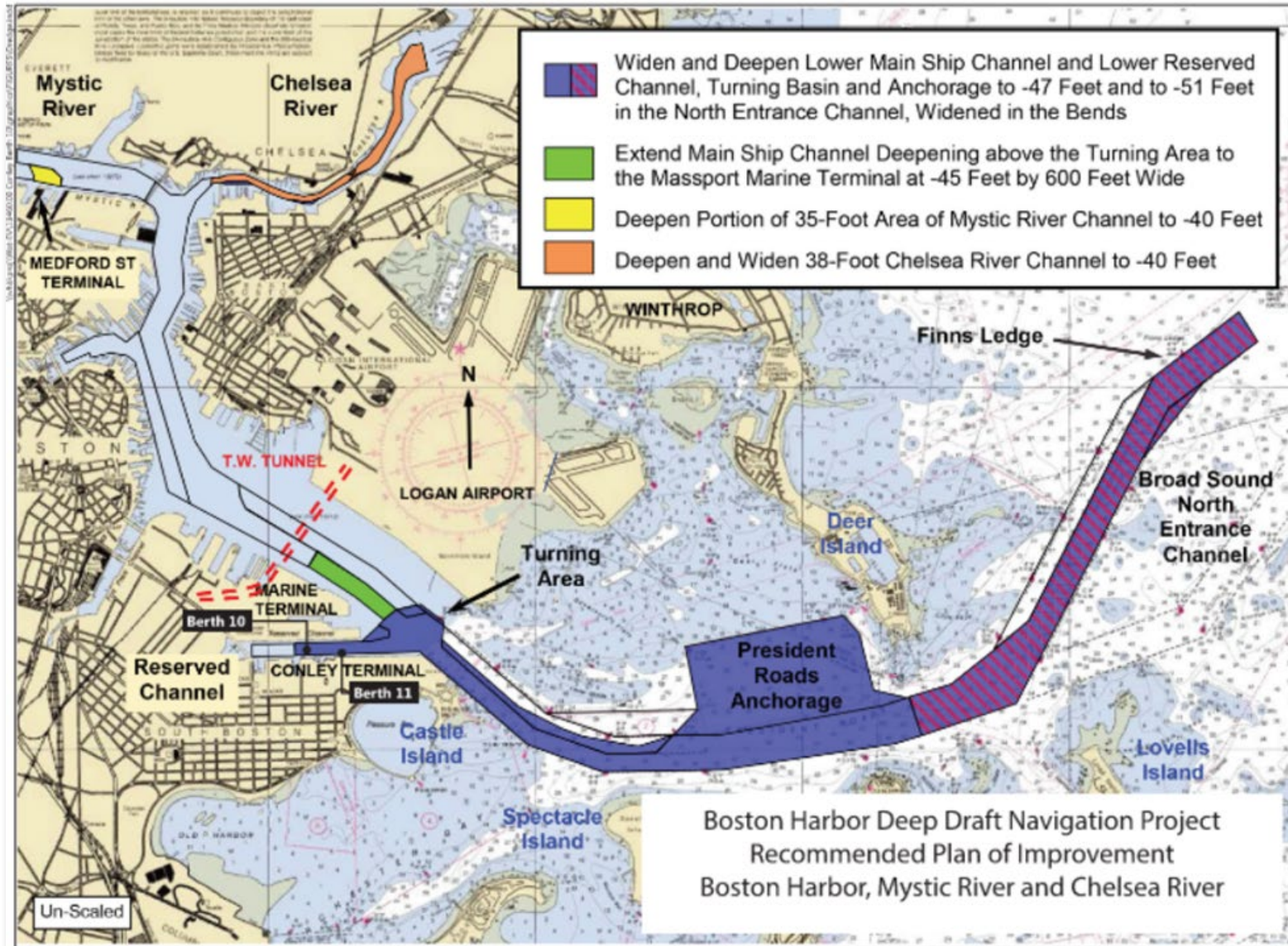


Reduce, Reuse, Recycle: A Story of Contaminated Materials The Designer's Perspective



RUSSELL J. TITMUS, P.E. | GEI Consultants

Boston Harbor Deepening



Conley Terminal Expansion

Design Criteria:

- New Panamax size ships -1200 feet LOA x 160 feet Beam x 50 feet draft
- New higher cranes designed for up to 22 container wide vessels
- Container Yard to support vessel operations

Conley Terminal Expansion

Conley Terminal - a Container Terminal in Downtown Boston

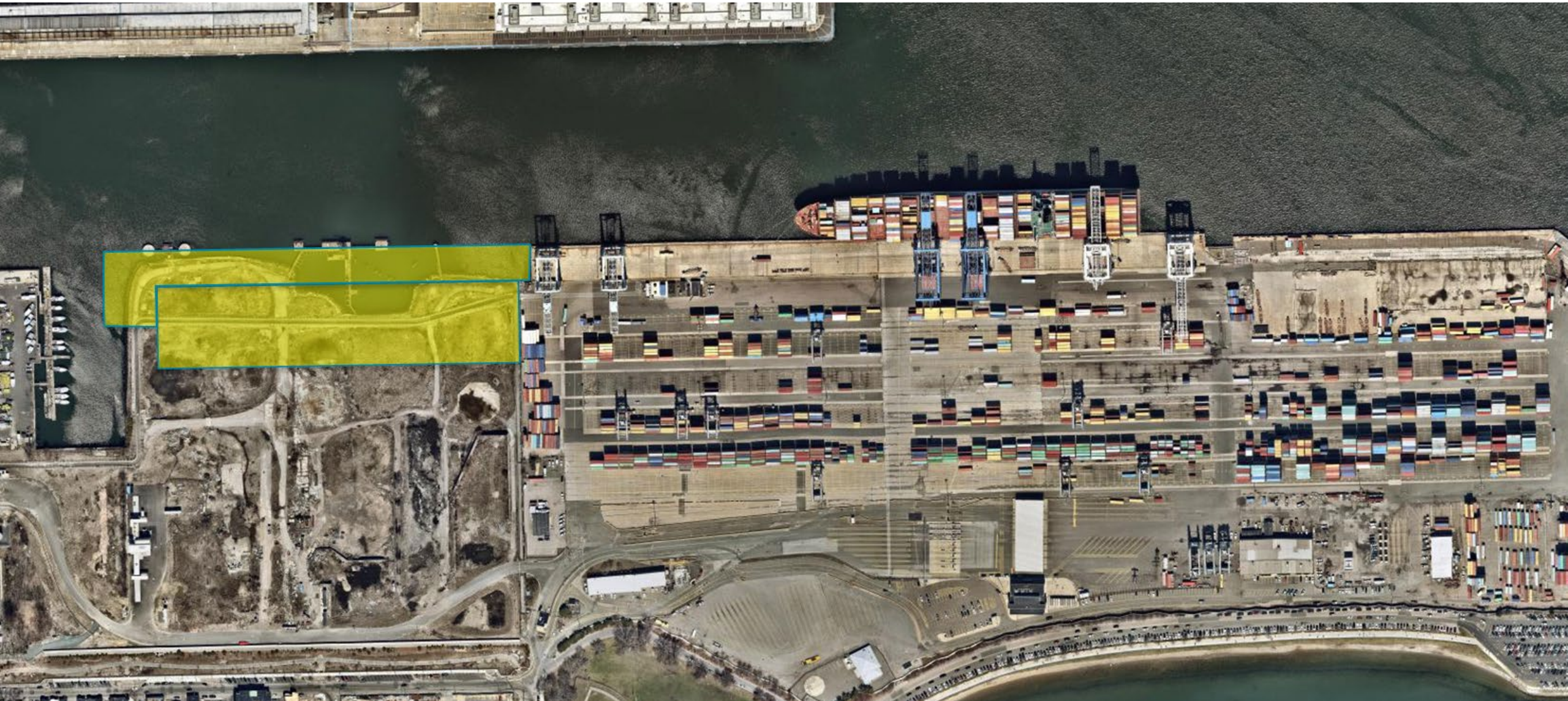
Constraints:

- Air space – close to Logan International
 - Highest available airspace in the Reserved Channel furthest from the airport
- Channel Width – limited navigation width in the Reserved Channel
 - Less than 600 feet wide
- Existing Terminal – must remain operational through construction
- Cruise Terminal – must remain operational through construction

Constraints



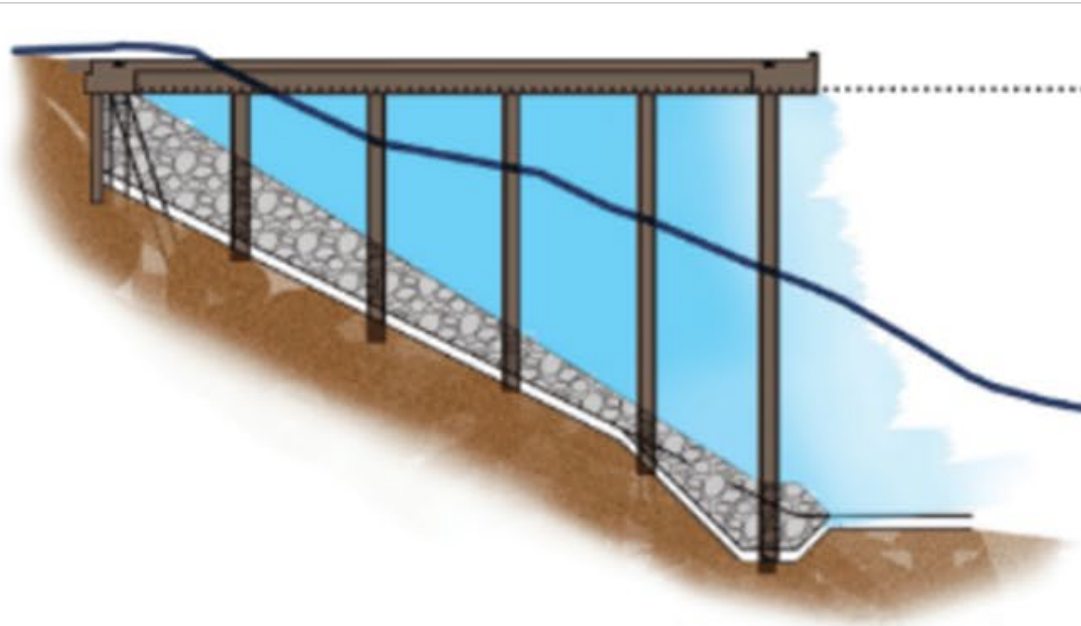
Proposed Berth Layout



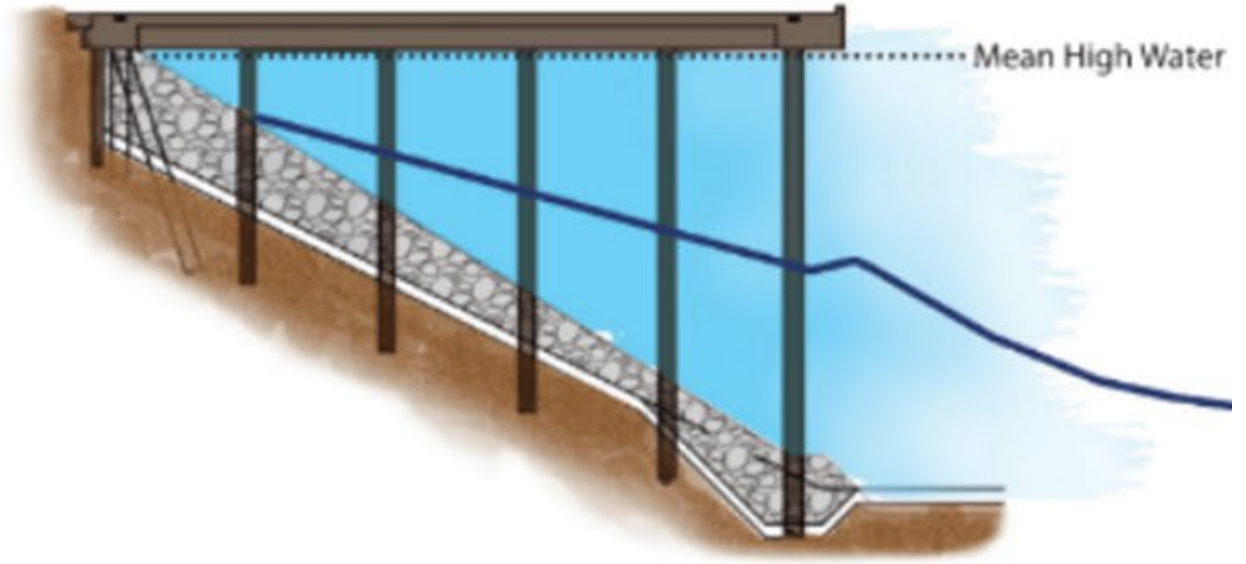
Key Elements

- Bulkhead to support shoreline and provide containment for site
- ISS barrier
- Pile supported wharf
- High-capacity crane foundations
- Dredging - Urban fill, Oily material, CAD Cell, Improvement material

Proposed Berth Layout



[No Title]



Mean High Water

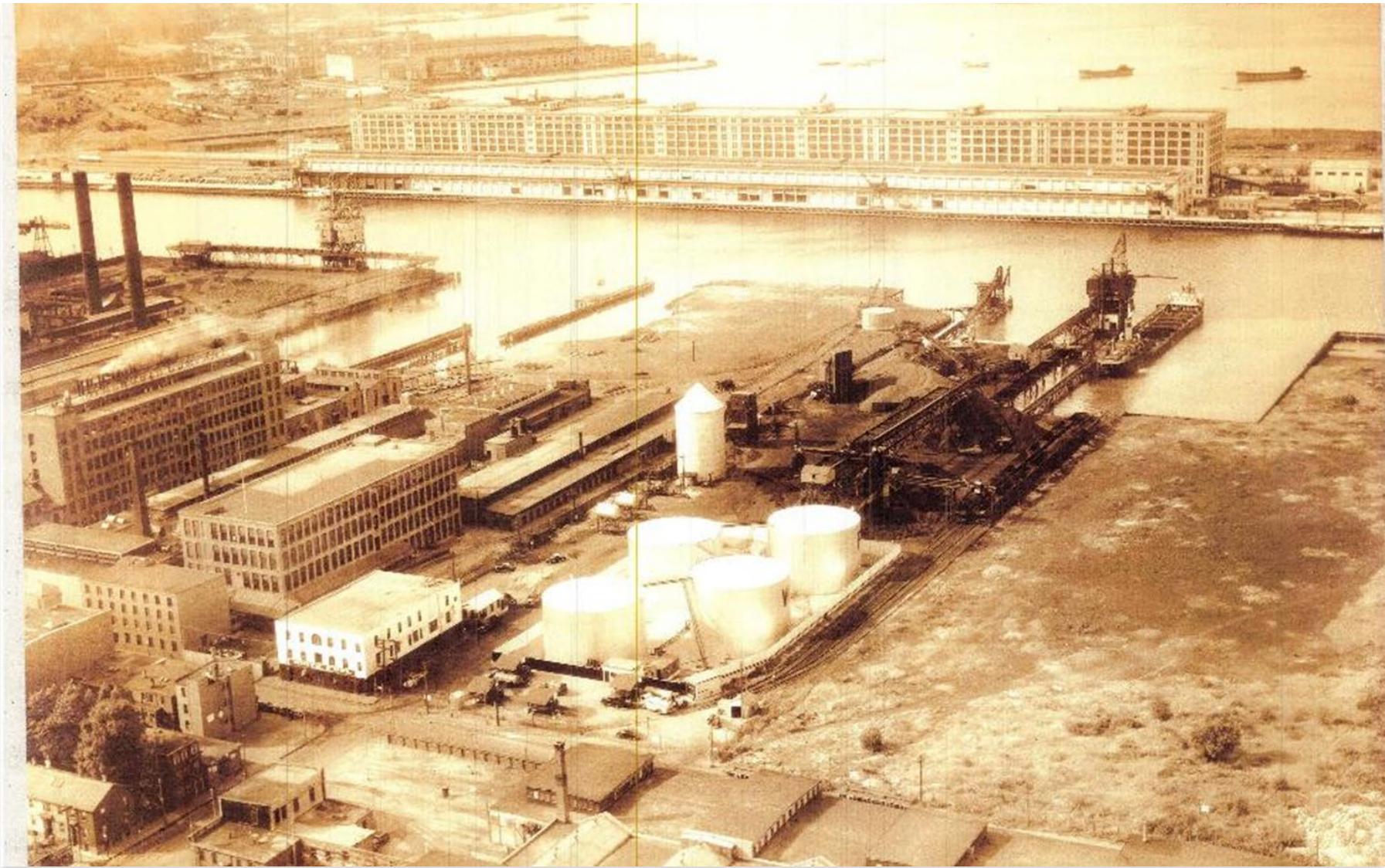
Engineering & Construction Challenges

- Lack of information
- Demolition
- Obstructions
- Constructability
- Shallow Rock



07/09/2018

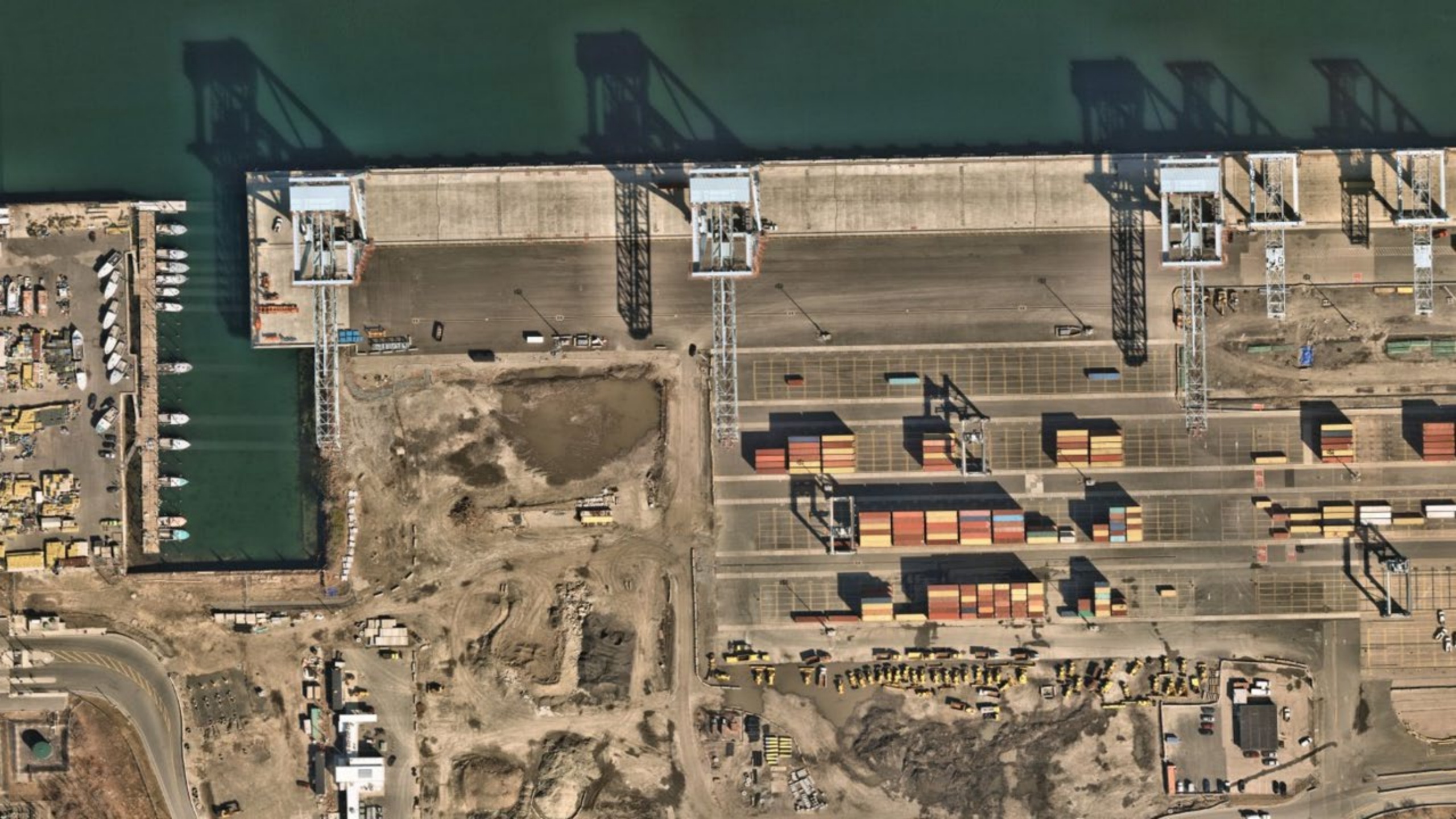














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